

IN THE CLAIMS

1. (Currently Amended) A non-halogenated, fire retardant, expanded poly (arylene ether)/polystyrene blend produced by the method comprising:

in a first step, forming a fire retardant mixture ~~comprising~~ consisting essentially of a single non-halogenated fire retardant, poly(arylene ether) resin, a nucleating agent, an impact modifier, and a polystyrene resin essentially free of plasticizer by intimately mixing in melt;

in a second step, forming a non-halogenated, fire retardant, expandable poly (arylene ether)/polystyrene blend by intimately mixing in melt the fire retardant mixture with a blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets; and

in a third step, expanding the non-halogenated, fire retardant, expandable poly(arylene ether)/polystyrene blend,

wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units and is present in an amount of 40 to 70 weight percent, based on the total weight of the blend,

wherein the poly(arylene ether) is present in an amount of 30 to 60 weight percent, based on the total weight of the blend,

wherein the single non-halogenated fire retardant is present in an amount of 5 to 20 weight percent based on the total weight of the blend, and selected from the group consisting of butylated triphenyl phosphate ester, resorcinol tetraphenyl diphosphate, and bis-phenol A tetraphenyl diphosphate and

wherein the blend produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals.

2. (Canceled)

3. (Original) The non-halogenated, fire retardant, expanded poly (arylene ether)/polystyrene blend of Claim 1 wherein the poly(arylene ether) has an intrinsic viscosity of about 0.1 to about 0.6 deciliters per gram as measured in chloroform at 25°C.

4-8. (Canceled)

9. (Currently Amended) The non-halogenated, fire retardant, expanded poly (arylene ether)/polystyrene blend of Claim 1, wherein the blowing agent ~~comprises~~ consists of a pentane isomer or a mixture of pentane isomers.

10. (Currently Amended) An expanded poly(arylene ether)/polystyrene blend produced by the method comprising:

in a first step, forming a first mixture ~~comprising~~ consisting essentially of a poly(arylene ether) resin, ~~a nucleating agent, an impact modifier, and a~~ polystyrene resin essentially free of plasticizer by intimately mixing in melt;

in a second step forming an expandable poly(arylene ether)/polystyrene blend by intimately mixing in melt the first mixture with a blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets; and

in a third step, expanding the expandable poly(arylene ether)/polystyrene blend, wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units and is present in an amount of 40 to 70 weight percent, based on the total weight of the blend,

wherein the poly(arylene ether) is present in an amount of 30 to 60 weight percent, based on the total weight of the blend, and

wherein the blend produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals.

11. (Original) The expanded poly (arylene ether)/polystyrene blend of Claim 10 wherein the poly(arylene ether) has an intrinsic viscosity of about 0.1 to about 0.6 deciliters per gram as measured in chloroform at 25°C.

12-15. (Canceled)

16. (Currently Amended) The expanded poly (arylene ether)/polystyrene blend of Claim 10, wherein the blowing agent ~~comprises~~ consists of a pentane isomer or a mixture of pentane isomers.

17. (Currently Amended) An expandable poly(arylene ether)/polystyrene blend ~~comprising~~ consisting essentially of a poly(arylene ether) resin, polystyrene resin essentially free of plasticizer, a nucleating agent, an impact modifier, and blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets and wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units, the poly(arylene ether) is present in an amount of 30 to 60 weight percent, the polystyrene is present in an amount of 40 to 70 weight percent, based on the total weight of the blend, and wherein the blend, once expanded, produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals.

18. (Original) The expandable poly (arylene ether)/polystyrene blend of Claim 17 wherein the poly(arylene ether) has an intrinsic viscosity of about 0.1 to about 0.6 deciliters per gram as measured in chloroform at 25°C.

19-21. (Canceled)

22. (Currently Amended) The expandable poly (arylene ether)/polystyrene blend of Claim 17, wherein the blowing agent ~~comprises~~ consists of a pentane isomer or a mixture of pentane isomers.

23. (Currently Amended) A non-halogenated, fire retardant, expandable poly(arylene ether)/polystyrene blend ~~comprising~~ consisting essentially of poly(arylene ether) resin, polystyrene resin essentially free of plasticizer, an impact modifier, a single non-halogenated fire retardant, a nucleating agent and blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets and wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units and is present in an amount of 40 to 70 weight percent, based on the total weight of the blend, the poly(arylene ether) is present in an amount of 30 to 60 weight percent, based on the total weight of the blend, wherein the single non-halogenated fire retardant is present in an amount of 5 to 20 weight percent based on the total weight of the blend, and selected from the group consisting of butylated triphenyl phosphate ester, resorcinol tetraphenyl diphosphate, and bis-phenol A tetraphenyl diphosphate and wherein the blend, once expanded, produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals..

24. (Original) The non-halogenated, fire retardant, expandable poly (arylene ether)/polystyrene blend of Claim 23 wherein the poly(arylene ether) has an intrinsic viscosity of about 0.1 to about 0.6 deciliters per gram as measured in chloroform at 25°C.

25-27. (Canceled)

28. (Currently Amended) The non-halogenated, fire retardant, expandable poly (arylene ether)/polystyrene blend of Claim 23, wherein the blowing agent ~~comprises~~ consists of a pentane isomer or a mixture of pentane isomers.

29. (Canceled)

30. (Currently Amended) An expandable poly(arylene ether)/polystyrene blend produced by the method comprising:

in a first step, forming a first mixture ~~comprising~~ consisting essentially of a poly(arylene ether) resin, ~~a nucleating agent, an impact modifier~~ and polystyrene resin essentially free of plasticizer, by intimately mixing in melt; and

in a second step forming an expandable poly(arylene ether)/polystyrene blend by intimately mixing in melt the first mixture with a blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets,

wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units and is present in an amount of 40 to 70 weight percent, based on the total weight of the blend

wherein the poly(arylene ether) is present in an amount of 30 to 60 weight percent, based on the total weight of the blend, and

wherein the blend, once expanded, produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals.

31. (Original) The expandable poly (arylene ether)/polystyrene blend of Claim 30 wherein the poly(arylene ether) has an intrinsic viscosity of about 0.1 to about 0.6 deciliters per gram as measured in chloroform at 25°C.

32-34. (Canceled)

35. (Currently Amended) The expandable poly (arylene ether)/polystyrene blend of Claim 30, wherein the blowing agent ~~comprises~~ consists of a pentane isomer or a mixture of pentane isomers.

36. (Canceled)

37. (Currently Amended) A non-halogenated, fire retardant expandable poly(arylene ether)/polystyrene blend produced by the method comprising:

in a first step, forming a first mixture ~~comprising~~ consisting essentially of poly(arylene ether) resin, polystyrene resin essentially free of plasticizer, a nucleating agent, an impact modifier, and a single non-halogenated fire retardant by intimately mixing in melt; and

in a second step forming an expandable poly(arylene ether)/polystyrene blend by intimately mixing in melt the first mixture with a blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets,

wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units and is present in an amount of 40 to 70 weight percent, based on the total weight of the blend,

wherein the poly(arylene ether) is present in an amount of 30 to 60 weight percent, based on the total weight of the blend,

wherein the single non-halogenated fire retardant is present in an amount of 5 to 20 weight percent based on the total weight of the blend, and selected from the group consisting of butylated triphenyl phosphate ester, resorcinol tetraphenyl diphosphate, and bis-phenol A tetraphenyl diphosphate and

wherein the blend, once expanded, produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals.

38. (Original) The non-halogenated, fire retardant, expandable poly (arylene ether)/polystyrene blend of Claim 37 wherein the poly(arylene ether) has an intrinsic viscosity of about 0.1 to about 0.6 deciliters per gram as measured in chloroform at 25°C.

39-43. (Canceled)

44. (Currently Amended) The non-halogenated, fire retardant, expandable poly (arylene ether)/polystyrene blend of Claim 37, wherein the blowing agent ~~comprises~~ consists of a pentane isomer or a mixture of pentane isomers.

45-51. (Canceled)

52. (Currently Amended) A non-halogenated, fire retardant, expandable poly (arylene ether)/polystyrene blend produced by the method comprising:

in a first step, melt mixing independent components ~~comprising consisting essentially of a single non-halogenated fire retardant, poly(arylene ether) resin, impact modifier, nucleating agent, and a polystyrene resin essentially free of plasticizers to form a fire retardant mixture;~~

in a second step, forming a non-halogenated, fire retardant, expandable poly (arylene ether)/polystyrene blend by intimately mixing in melt the fire retardant mixture with a blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets, and wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units and is present in an amount of 40 to 70 weight percent, based on the total weight of the blend,

wherein the poly(arylene ether) is present in an amount of 30 to 60 weight percent, based on the total weight of the blend,

wherein the single non-halogenated fire retardant is present in an amount of 5 to 20 weight percent based on the total weight of the blend, and selected from the group consisting of butylated triphenyl phosphate ester, resorcinol tetraphenyl diphosphate, and bis-phenol A tetraphenyl diphosphate and

wherein the blend, once expanded, produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals. .

53. (Currently Amended) An expandable poly(arylene ether)/polystyrene blend produced by the method comprising:

in a first step, melt mixing independent components ~~comprising consisting essentially of a poly(arylene ether) resin, a nucleating agent, an impact modifier, and a polystyrene resin~~ essentially free of plasticizer by intimately mixing to form a first mixture; and

in a second step forming an expandable poly(arylene ether)/polystyrene blend by intimately mixing in melt the first mixture with a blowing agent wherein the expandable poly(arylene ether)/polystyrene blend is in the form of pellets and wherein the polystyrene has a molecular weight less than or equal to about 240,000 atomic mass units and is present in an amount of 40 to 70 weight percent, based on the total weight of the blend,

wherein the poly(arylene ether) is present in an amount of 30 to 60 weight percent, based on the total weight of the blend, and

wherein the blend, once expanded, produces a sound level less than or equal to about 60 decibels when the skin surface of a 2.5 cubic centimeter sample is rubbed across a clear coated test panel with a constant pressure of about 2-2.5 kilo Pascals. .